1. Arizona Water Company-Apache Junction

The City of Apache Junction is a rural community located in Pinal County on the eastern rim of the Phoenix metropolitan area. A variety of lifestyles are offered in Apache Junction, ranging from western rural acreage to more urban single-family residential neighborhoods. The economy of Apache Junction is based almost exclusively on recreation and retirement. Most commercial services in the area cater to tourists and recreation seekers on their way to Arizona's central lakes and forests. Extensive developments and accommodations in the area serve many retired persons as well as a large influx of winter visitors. The Arizona Water Company-Apache Junction service area is located approximately east of Butte Road, west of Mountain Road, north of Baseline Road, and south of McKellips Road.

The Arizona Water Company-Apache Junction serves 14,000 customers in the Apache Junction area. The other water provider in the area, the Arizona Water Company-Apache Junction Water District, serves 2,500 customers. This water provider is currently utilizing its existing CAP allocation of 6,000 afa.

A. Plans to Take and Use CAP Water

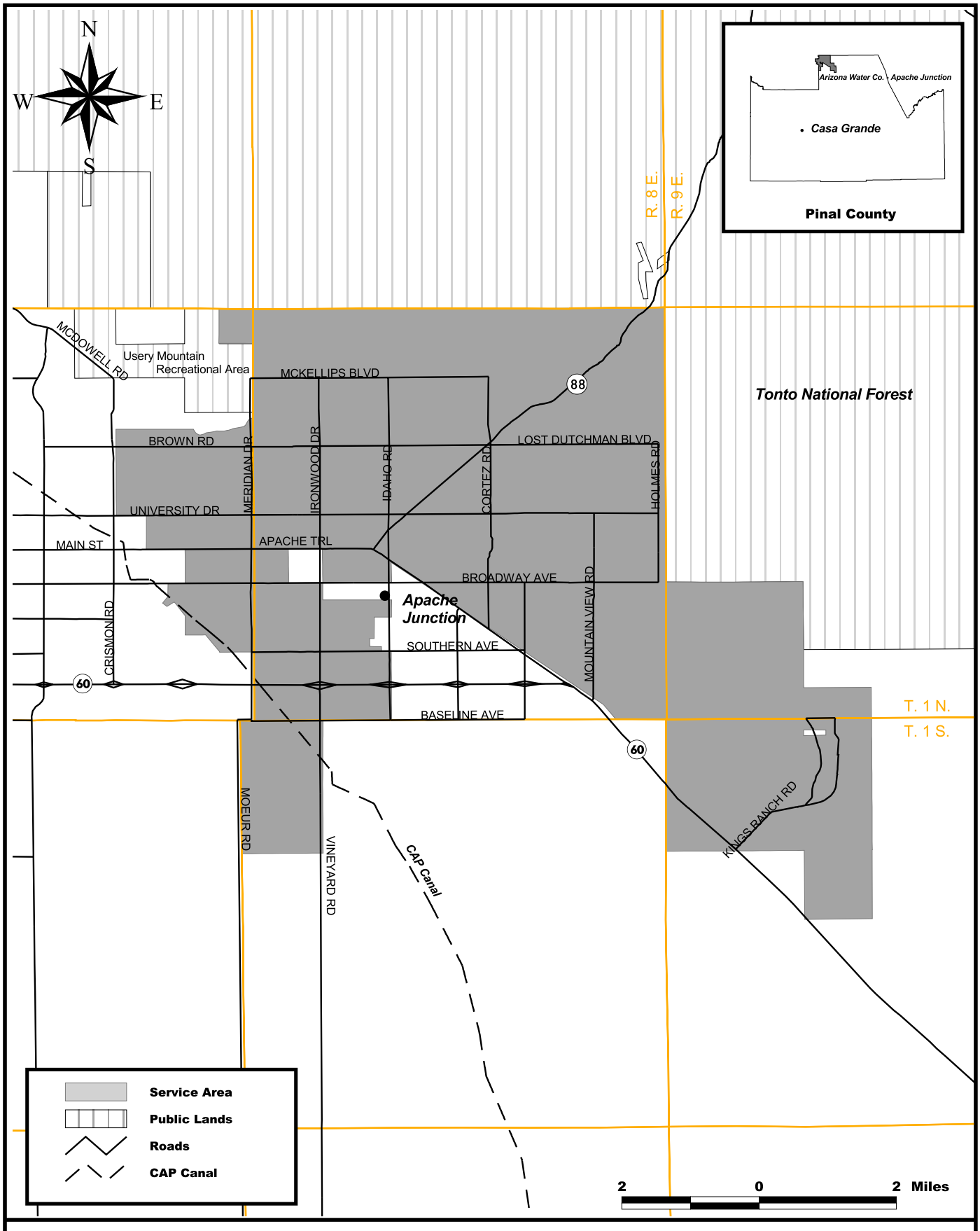
The Arizona Water Company-Apache Junction currently has a subcontract for 6,000 afa. Under the Settlement Alternative, Apache Junction would receive 285 afa of CAP water. Arizona Water Company-Apache Junction would only receive the additional allocation if the Town of Superior declines its allocation. That CAP water would be delivered for a 50-year contract period (i.e., from 2001-2051). The CAP water would be used to supplement both current and projected water supply demands over the next 50 years and would help reduce the continuing dependence on pumping groundwater from an overdrafted groundwater system. Table L-M&I-3 outlines the proposed allocations by alternative.

Table L-M&I-3
CAP Allocation Draft EIS
Arizona Water Company-Apache Junction – Proposed CAP Allocation

Alternative	Allocation (in afa)	Priority
Settlement Alternative	285*	M&I
No Action	0	-
Non-Settlement Alternative 1	285*	M&I
Non-Settlement Alternative 2	0	-
Non-Settlement Alternative 3A	0	-
Non-Settlement Alternative 3B	312*	NIA
Existing CAP Allocation	6,000	

* If the allocation is not accepted, the 285 af (or 312 af) from Apache Junction would be recommended for the Arizona Water Company for use in Superior or Apache Junction.

Figure L-M&I-2 shows the service area for the Arizona Water Company-Apache Junction. The service area covers approximately 48 square miles. The Arizona Water Company-Apache Junction is currently taking and using their full CAP allocation through a



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CAP Allocation Draft EIS
General Location Map
Arizona Water Company - Apache Junction

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Figure No. L-M&I-2

connection to the CAP distribution system and a pipeline located along Brown Road. The CAP water is being treated at the City of Mesa water treatment plant that is also located along Brown Road. They would take and use their additional allocation in the same manner. No additional facilities would be required to take and treat the additional CAP allocation (Garfield 2000).

B. Population Projection

The population in 1985 for Arizona Water Company-Apache Junction was 9,645. The estimated 2001 population level for Arizona Water Company-Apache Junction is 22,621, and the estimated 2051 population level is 33,738.

C. Water Demand and Supply Quantities

As previously shown in Appendix C–M&I Sector Water Uses, it is estimated that water demand in the Arizona Water Company-Apache Junction would increase from 6,695 af in year 2001 to 11,114 af in year 2051. The projected water uses both by water source and alternatives are provided below in Table L-M&I-4. Based on these anticipated water demands, the CAP water which would be allocated under the Settlement Alternative would provide 4.3 percent and 2.6 percent of the estimated water supply required for the Arizona Water Company-Apache Junction for the years 2001 and 2051, respectively.

Table L-M&I-4
CAP Allocation Draft EIS
Arizona Water Company-Apache Junction – Projected Water Use

Alternative	Annual CAP Deliveries		Groundwater		CAGRD (Groundwater)		Total Demand	
	2001	2051	2001	2051	2001	2051	2001	2051
Settlement Alternative	6,285	6,285	410	4,829	0	0	6,695	11,114
No Action Alternative	6,000	6,000	410	4,829	285	285	6,695	11,114
Non-Settlement Alternative 1	6,285	6,285	410	4,829	0	0	6,695	11,114
Non-Settlement Alternative 2	6,000	6,000	410	4,829	285	285	6,695	11,114
Non-Settlement Alternative 3A	6,000	6,000	410	4,829	285	285	6,695	11,114
Non-Settlement Alternative 3B	6,285	6,285	410	4,829	0	0	6,695	11,114
Note: A more detailed breakdown of supplies may be found in Appendix C.								

It is estimated that the demand for water at the end of the CAP contract period would be approximately 11,114 af. For all alternatives, there is estimated to be no unmet demand. In the Settlement Alternative, Non-Settlement Alternative 1, and Non-Settlement Alternative 3B, 285 afa of demand are met by the additional CAP allocation. Alternatively, this 285 afa of demand are met by CAGRD membership under the No Action Alternative, Non-Settlement Alternative 2, and Non-Settlement Alternative 3A.

D. Environmental Effects

The following sections include a general description of existing conditions relating to land use, water resources and socioeconomics for each entity. The following summaries also include a description of the existing conditions and brief description of the impacts to biological and cultural resources that would result from construction of CAP delivery facilities and conversion of desert and agricultural lands to urban uses.

1. Land Use

Table L-M&I-5 provides the existing acres of land within the Arizona Water Company-Apache Junction service area, based on review of aerial photographs and field surveys and habitat mapping completed as part of the biological resources assessment of this draft EIS.

Table L-M&I-5
CAP Allocation Draft EIS
Arizona Water Company-Apache Junction – Projected Land Use Changes Within the MPA (in acres)

Alternative	Year	Agriculture	Agriculture Urbanized	Desert	Desert Urbanized	Urban	Changes to Urban Acreage
Settlement Alternative	2001	0	-	10,725	-	19,941	-
	2051	0	0	8,872	1,853	21,794	1,853
No Action	2001	0	-	10,725	-	19,941	-
	2051	0	0	8,872	1,853	21,794	1,853
Non-Settlement Alternative 1	2001	0	-	10,725	-	19,941	-
	2051	0	0	8,872	1,853	21,794	1,853
Non-Settlement Alternative 2	2001	0	-	10,725	-	19,941	-
	2051	0	0	8,872	1,853	21,794	1,853
Non-Settlement Alternative 3A	2001	0	-	10,725	-	19,941	-
	2051	0	0	8,872	1,853	21,794	1,853
Non-Settlement Alternative 3B	2001	0	-	10,725	-	19,941	-
	2051	0	0	8,872	1,853	21,794	1,853

2. Archaeological Resources

Survey coverage in the Arizona Water Company-Apache Junction service area is generally characterized by long, linear projects and small (averaging 40 to 160 acres) noncontiguous block surveys. Exceptions include the Queen Creek portion of Reclamation's extensive Salt-Gila Aqueduct–CAP survey (e.g., Stein 1979; Teague and Crown 1984), and Archaeological

Consulting Services, Ltd. (ACS's) survey for the Superstition Mountain Development (Moreno and Macnider 1996). These projects yielded numerous prehistoric sites, including villages, artifact scatters, roasting pits, fire-cracked rock concentrations, bedrock mortars, petroglyphs, and lithic quarries. The majority of sites are affiliated with Archaic, Hohokam, and Salado occupations; protohistoric Yavapai sites also have been documented. Other significant cultural resources—including the Hieroglyphic Canyon Site, a National Register property—have been recorded in the Tonto National Forest, Hieroglyphic Mountains, and other adjacent areas. Arizona Water Company-Apache Junction does not have a historic preservation program.

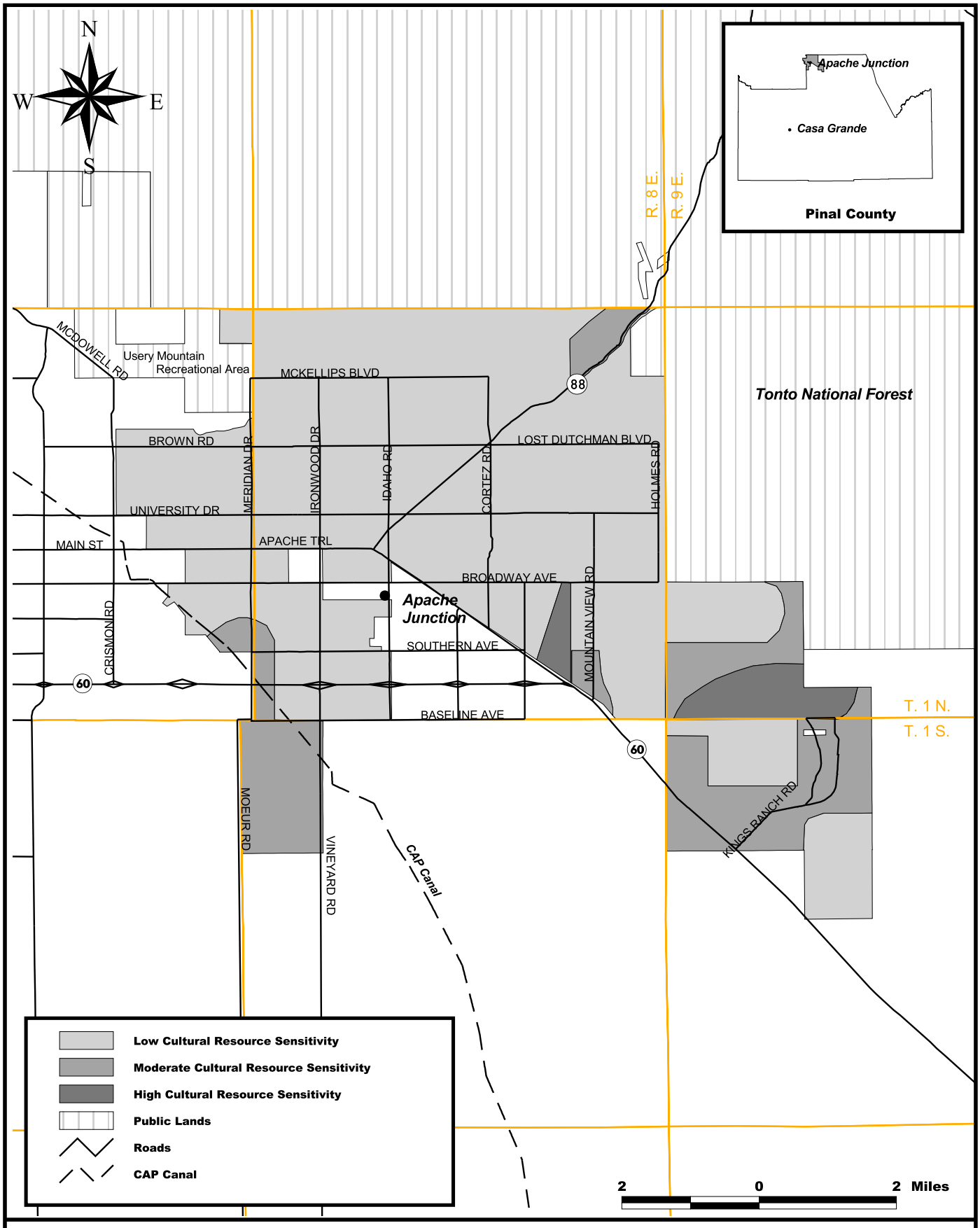
Cultural resource sensitivity areas in the service area are shown in Figure L-M&I-3. Based on the limited data used to generate the cultural sensitivity designations, the potential for cultural resource impacts in the Arizona Water Company-Apache Junction service area is low to moderate. Mitigation of cultural resource impacts due to urban expansion would be determined by local jurisdictions, and development of applicable permit requirements (such as the Clean Water Act (CWA) Section 404 permit). Impacts on cultural resources due to future land use changes would be identical for each of the five alternatives. Mitigation for such impacts would be dependent on the requirements of the local jurisdiction. There would be no cultural resources impacts from construction of CAP water delivery facilities, since no new facilities would be required.

3. Biological Resources

Existing Habitats

The Arizona Water Company-Apache Junction service area is located at the western base of the Superstition Mountains at an elevation of 2200 feet. Some north-and east-facing slopes in the northeastern section are represented by Jojoba Mixed Scrub Association where the frequency of jojoba is high and co-dominants include wild buckwheat, Berlandier's wolfberry, teddybear cholla, and ephedra. Saguaro density is moderate. Most other slopes and coarser soils support Bursage/Foothill Paloverde Association where co-dominants include creosote-bush, jojoba, staghorn cholla, Gray's krameria, and little-leaf krameria. Other common trees include velvet mesquite, desert ironwood, blue-paloverde, and saguaro. Saguaro density is moderate to high. Creosote-Bush Scrub Association dominates the silty plains to the south where the cover is very low and dominated almost entirely by creosote-bush and bursage. Trees, such as foothill paloverde and desert ironwood, are widely-spaced. Blue-Paloverde Desert Ironwood Association habitat occurs along major washes and is characterized by ironwood, blue-paloverde, and velvet mesquite. The habitat zones located in the Arizona Water Company-Apache Junction service area are shown on Figure L-M&I-4.

Table L-M&I-6 provides the habitat acreages in the Arizona Water Company-Apache Junction service area for the habitat zones described above.



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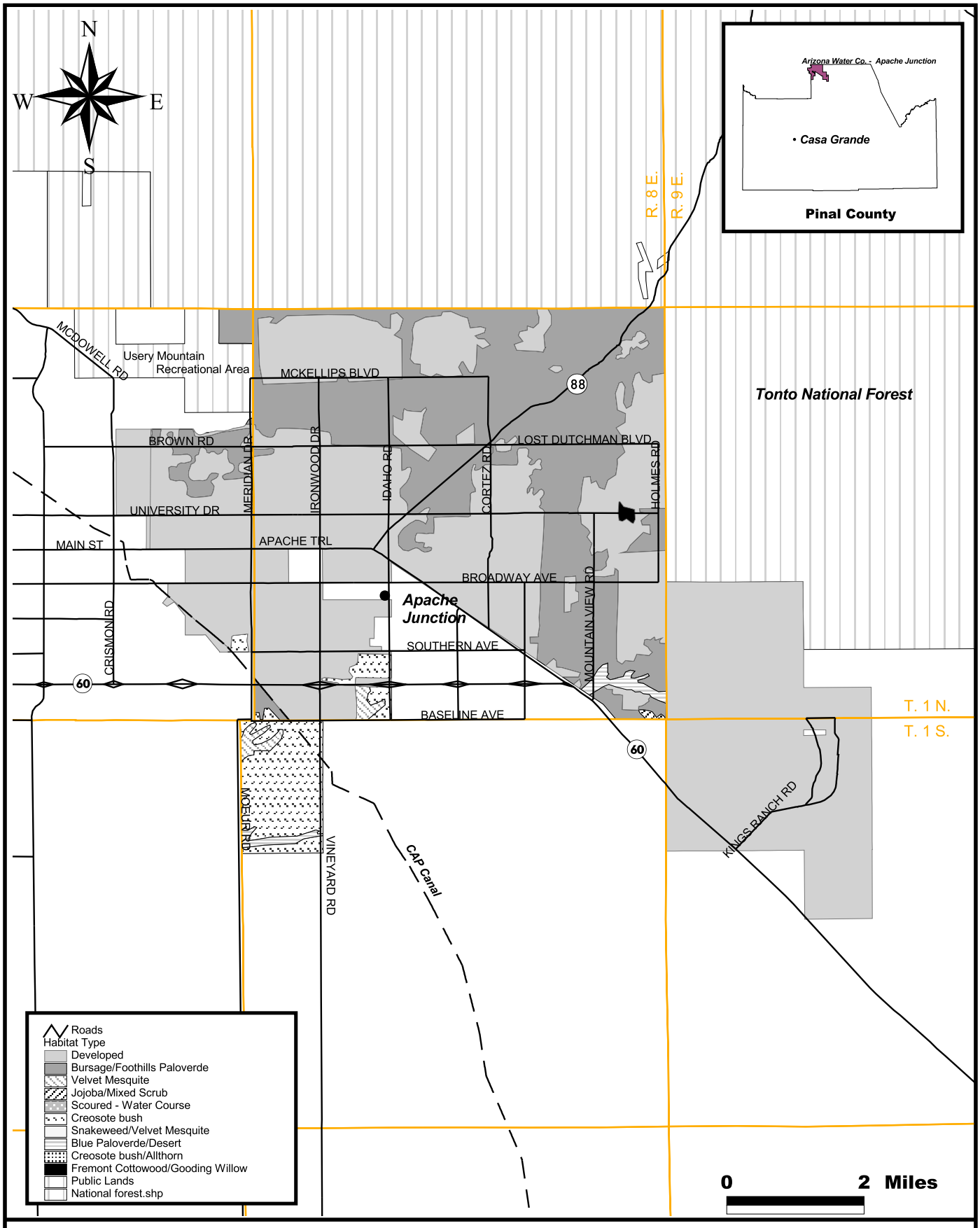
CAP Allocation Draft EIS
Cultural Resources
Arizona Water Company - Apache Junction

June 2000

Figure No. L-M&I-3



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CAP Allocation Draft EIS
Habitat Zones
Arizona Water Company - Apache Junction

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Figure No. L-M&I-4

Table L-M&I-6 CAP Allocation Draft EIS Arizona Water Company-Apache Junction – Habitat Acreages	
Vegetation Name	**Acres**
Developed	19,941
Bursage / Foothills Paloverde	8,778
Velvet Mesquite	167
Jojoba / Mixed Scrub	18
Creosote-Bush	1,512
Blue Paloverde / Desert	219
Fremont Cottonwood / Goodding Willow	31
Total	**30,666**

Impacts to Biological Resources

Under the No Action Alternative, urban growth within the Arizona Water Company-Apache Junction service area over the 50-year study period would result in loss of estimated 20,870 acres of Sonoran Desertscrub and associated wildlife resources. Under the action alternatives, there is no difference in impacts from the No Action baseline. No new CAP water delivery facilities are required, so no additional construction-related impacts to biological resources would occur.

Potential Threatened and Endangered (T&E) Species and Acres of Potential T&E Species Habitat

Because the allocation of CAP water has no effect on urban growth, there would be no effect on T&E species from the CAP allocation. Arizona Water Company-Apache Junction would be responsible for complying with the relevant provisions of the Endangered Species Act (ESA) as it permits and approves future urban growth. The Arizona Water Company-Apache Junction service area is located within Pinal County for which there are 13 T&E species listed by the United States Fish and Wildlife Service (USFWS). However, potential habitat only exists for cactus ferruginous pygmy-owl. Approximately 9,164 acres of potentially suitable habitat for the cactus ferruginous pygmy-owl were identified within the service area.

4. Water Resources

Groundwater in the Arizona Water Company-Apache Junction service area is obtained from the alluvium in the eastern part of the Salt River Valley. Before CAP water became available, demands on Arizona Water Company-Apache Junction were met entirely with pumped groundwater. Groundwater levels historically declined due to that groundwater pumping, and there has been some associated subsidence. The concentration of TDS in the underlying groundwater is generally less than 500 ppm.

Estimated groundwater level impacts are summarized in Table L-M&I-7 which shows the estimated groundwater level change for the period from 2001-2051 for each alternative as well as the groundwater level impacts or the difference between the change in groundwater levels for each alternative relative to the change for the No Action Alternative.

Under the No Action Alternative, groundwater levels would decline by about 84 feet from 2001 to 2051. While CAP water available to Apache Junction would be used to meet demands and offset groundwater pumping, increased demands over time would be met through increased local groundwater pumping. Substantial changes in groundwater quality would not be anticipated. However, there would be the potential for subsidence due to the lower groundwater levels.

Groundwater levels would also decline for all of the action alternatives. These declines would be similar to the No Action Alternative. Substantial changes in groundwater quality would not be anticipated, although there would be the potential for subsidence due to the lower groundwater levels.

Table L-M&I-7
CAP Allocation Draft EIS
Arizona Water Company-Apache Junction – Groundwater Data Table

Alternative	Apache Junction*	
	Estimated Groundwater Level Change from 2001-2051 (in Feet)	**Groundwater Level Impact** (in Feet)**
No Action Alternative	-84	--
Settlement Alternative	-81	3
Non-Settlement Alternative 1	-80	4
Non-Settlement Alternative 2	-89	-5
Non-Settlement Alternative 3A	-92	-8
Non-Settlement Alternative 3B	-88	-4

*****Values correspond to Apache Junction sub-area, as discussed in Appendix I.
** Computed by subtracting the estimated groundwater decline from 2001 to 2051 for the No Action Alternative from the estimated change in groundwater level for the same period for the alternative under consideration. The estimated impact is considered to be more accurate than the estimated decline in groundwater levels.

5. Socioeconomic

The same population growth is supported under all alternatives, including the No Action Alternative. However, the cost of providing water may vary by alternative. Costs were estimated, on a per af basis, of providing the proposed allocations and, in their absence, alternative water supplies. The alternative water supplies include joining the CAGRD and, if needed, treating and reusing effluent. The difference in cost for this small

increment of Apache Junction's total water supply is considered insignificant. It should be noted that the increment of demand met by the proposed CAP allocation is approximately 2.6 percent of the total year 2051 demand for Arizona Water Company-Apache Junction.

Table L-M&I-8
CAP Allocation Draft EIS
Arizona Water Company-Apache Junction–Cost of Potable Water for Additional Allocation Increment

Alternative	Cost of Water ($ per af)	Water Source
Settlement Alternative	154[a]	CAP Allocation
No Action	286-291 [b]	CAGRD
Non-Settlement Alternative 1	154[a]	CAP Allocation
Non-Settlement Alternative 2	286-291[b]	CAGRD
Non-Settlement Alternative 3A	286-291[b]	CAGRD
Non-Settlement Alternative 3B	154[a]	CAP Allocation

Notes:
a. Estimated average unit cost in year 2000 dollars.
b. Estimated range of unit costs in year 2000 dollars. Range is due to estimated change in groundwater pumping lifts during study period and does not include wellhead treatment costs.